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A NEW PYCNOGONID FROM THE BAHAMAS

LEON J. COLE

MR. Thomas Barbour has kindly turned over to me for examination a single pycnogonid taken upon the expedition made by himself, in company with Dr. G. M. Allen and Mr. Owen Bryant, to the Bahama Islands in the summer of 1904. A general narrative of their cruise has been published privately by Allen and Barbour (: 04). The present paper constitutes the seventh of a series based upon the specimens collected by them.

It would appear from the fact that only a single pycnogonid was taken during this trip, and that none has been reported from the collections of previous scientific expeditions to the same region, that this group must be poorly represented in the waters contiguous to the Bahamas. And in this connection it is interesting to note that the specimen under consideration belongs without doubt, in its systematic relationships, with two species which Dohrn ('81) described from the Gulf of Naples, constituting his genus Barana. This genus is undoubtedly very close to Parazetes, established by Slater ('79) for a pycnogonid from Japan, and possibly should be united with it. The chief difference appears to be the possession by Parazetes of only 9 joints in the palpi, but this is of the less importance when one considers that it is apparently the terminal joint which is lacking, and that the other joints have about the same relative proportions that they have in Barana. Slater lays emphasis on the point that in his specimen the proboscis was 4-cleft; but since the trimerous proboscis is almost universal[1] in all other known Pycnogonida, it is not unreasonable to suppose that he might have had a specimen possessing an individual abnormality. Unfortunately he gives no figures, which would greatly have facilitated the comparison of Parazetes with other pycnogonids. Should later discoveries show these forms to belong properly in the same genus, the name Parazetes will take precedence over Barana.

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[1] In *Rhynchothorax mediterraneus* O. Costa the proboscis is said to consist of but two antimeres, owing to the failure of the dorsal antimere to develop (*cf.* Dohrn, '81, p. 211).

As Sars ('91, p. 133) remarks, the genus Ascorhynchus is certainly very close to Barana, but Eurycyde appears to be well characterized. It seems to me doubtful that Nymphopsis[1] Haswell ('85) and Alcinous O. Costa ('61) belong in this family (Eurycydidæ).

Barana latipes sp. nov.

Pl. 1, Figs. 1–4; Pl. 2, Figs. 5–11

Type: Adult ♀, Museum of Comparative Zoölogy, no. 6947, Crustacea. Collected by Owen Bryant, from rocky shore, Sweeting's Village, Great Abaco, Bahamas, 22 July, 1904.

Trunk broad, compact, tapering somewhat posteriorly; segmentation well marked, the first three segments conspicuously enlarged dorsally and ventrally at their posterior ends, this enlargement forming almost a knob on the dorsal side. Lateral processes stout, about as broad as long, closely approximated but without touching, and each with a conical protuberance dorsally near its distal end. First trunk segment extending anteriorly from the eye tubercle in an elongate, cylindrical neck, which has distinct processes for the articulation of the palpi and the ovigera, the former at the anterior end, the latter immediately anterior to the processes of the first legs. The neck is prolonged at its anterior end into two sharp conical processes, beneath which the chelifori arise. Trunk and all its processes almost smooth and unarmed.

Caudal segment (Pl. 2, Fig. 7) elongate, horizontal, enlarged distally, and sparsely armed with a few scattered small spines; about as long as neck anterior to the processes for the ovigera.

Eye tubercle situated at the base of the neck and midway in the length of the first trunk segment; rather high and pointed forward; consisting of a smaller pointed dome placed on the anterior face of a larger conical elevation (see Pl. 1, Fig. 2). Eyes dark; in the smaller dome.

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[1] More fully characterized by Schimkewitsch ('87, p. 128).

Proboscis large, trimerous, with three distinct lips at the tip (Pl. 2, Fig. 6); it arises from the ventral side of the neck at its anterior end, and is directed downwards and backwards, in which position it reaches back to the posterior border of the second trunk segment (see Pl. 1, Fig. 2). In outline it is seen to be fusiform, but is divided at about its distal third by a distinct groove; the basal part does not, however, constitute a distinct segment as in Eurycyde. The proximal portion expands rather regularly to its outer end, while the distal portion taken by itself is distinctly pear-shaped. In cross section, or as viewed from the end (Pl. 2, Fig. 6), the proboscis is triangular, the dorsal angle being directed downward as the organ is carried turned back under the body.

Chelifori (Pl. 1, Fig. 3) short, 2-jointed,[1] and armed with a few small, scattered spines. The basal joint, which expands somewhat distally, is only about as long as the breadth of one of the lateral processes, while the second joint is merely a minute rounded knob. No indication could be seen of a former chelate condition, though these organs undoubtedly possess chelæ in the larva.

Palpi (Pl. 2, Fig. 11) arising from small lateral processes at the anterior end of the neck; 10-jointed; joints 1 and 2 very short; joints 3 and 5 about equal in length, and much the longest of all; the former expands rather gradually distally, while the latter is broadest near its proximal end. Joint 4 equals in length about one third of joint 5; joint 6 is still shorter and bends at a right angle to 5; joint 7 is slightly longer than joint 6, and the succeeding joints, 8, 9, and 10, decrease gradually in size. These distal four joints normally lie in nearly a straight line and parallel with joint 5, and reach back about two thirds of its length. The first five joints are sparsely armed with small spines, which become more numerous, however, at the distal end of joint 5,

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[1] Carpenter (: 05, p. 4) maintains with good reason that each of the parts of the chela, when present, should be counted as a joint. Without explanation, however, such a nomenclature is apt to introduce confusion, especially in those cases where the movable finger is reduced to the merest knob or projection on the palm, or may apparently disappear completely, as in the case of the species here described.

and are thickly set on the outer sides of all the succeeding joints, where they are about equal in length to the diameter of the joints. The whole palp, if extended straight backward, would reach about to the base of the caudal segment.

Ovigera (Pl. 2, Fig. 9) 11-jointed;[1] about a third longer (in the female) than the palp, the length to the principal flexure, between the fifth and sixth joints, being, however, almost exactly equal to the length of the palp to the corresponding place. Joint 1 short; joints 2 and 3 about equal in length, and longer than joint 1; joints 4 and 5 each slightly more than twice as long as joint 2 or 3; joint 6 bent backward upon joint 5, and only a little more than half as long; joints 7, 8, 9, and 10 grow successively smaller, both in length and in diameter; this part (the "terminal part") of the oviger is usually somewhat flexed. The terminal claw, which constitutes the eleventh joint of the appendage, is small and curved. The first four joints are practically free from hairs or spines; a few scattered short spines occur on joints 5 and 6; joints 7 to 10 are armed with three or four series of denticulate spines with deeply incised margins. These spines are longer on one side of the joint, and become smaller in each of the longitudinal rows as one moves across to the other side (Pl. 2, Figs. 9 and 10). Each of these joints has in addition near its distal end a rather strong simple spine. At the middle of the fourth joint is a prominent knob-like protuberance, which probably carries the opening of what Dohrn ('81, p. 123) calls the excretory organ.

Legs rather stout, somewhat less than twice as long as body from anterior end of neck to tip of caudal segment. Coxal joints (Pl. 2, Fig. 8) all short and broad, the second being a little longer than the first and third, which are about equal. The femur and first tibial joint are each a little shorter than the three coxal joints together, while the second tibial joint is slightly longer than the coxal region. Femur broadest, being about a third as long as broad; tibial joints narrower. These joints are flattened from side to side, so that the ventral margin forms rather a sharp edge.

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[1] I agree with Dohrn ('81, p. 123) that the terminal claw should be counted as a joint.

First tarsal joint short, squarish, bilobed distally; second tarsal joint four to five times as long as broad, its inner (ventral) border only slightly curved, the outer (dorsal) somewhat more arched (Pl. 1, Fig. 4). Claw short and rather stout, less than a third the length of the second tarsal joint; somewhat curved towards the tip; auxiliary claws wanting. The coxal and femoral joints are only sparsely armed with short spines, which become longer and more numerous on the tibial and tarsal joints, especially long bristles (about as long as the breadth of the segments) occurring along the dorsal margins of the second tibial and second tarsal joints. On the ventral side of the second tibial joint near its distal end begin a number of thickly set short spines, which become more numerous on the tarsal joints and give to them a comb-like appearance. No "heel" is developed on the foot.

A few ova could be distinguished in the femoral joints, and the openings of the oviducts could be seen in the usual position on the ventral side of the second coxal joints of the second, third, and fourth legs, and they were probably present also on the first pair although they could not be made out.

Color in alcohol yellowish or light brown.

Measurements

Extent	14 or 15 mm.
Length, anterior end of neck to tip of caudal segment	3.8 mm.
Length of proboscis	2.2 mm.
Length of caudal segment	1.0 mm.
Length of cheliforus	0.33 mm.
Length of palp	2.8 mm.
Length of oviger	3.5 mm.

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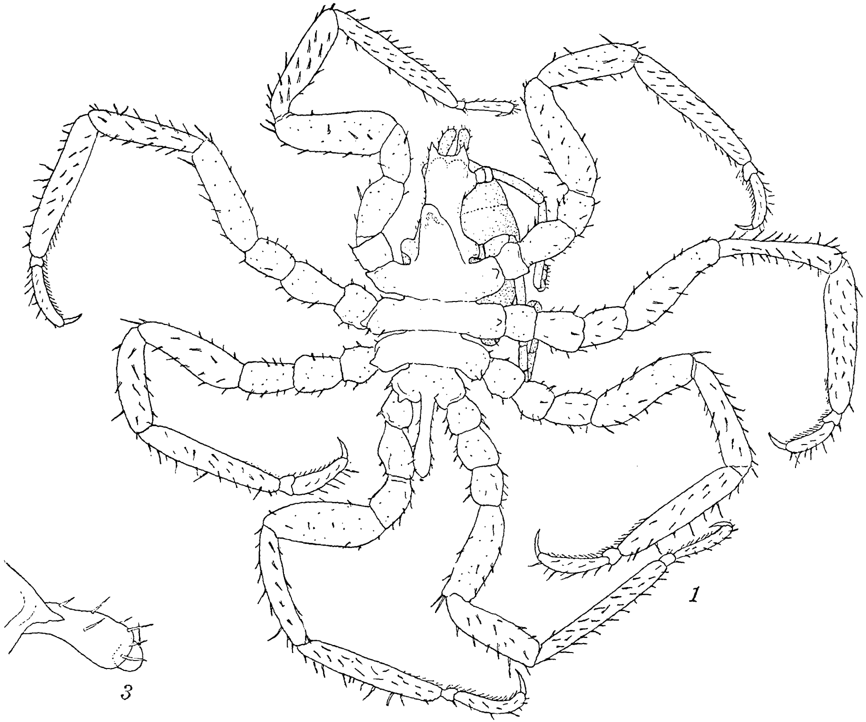
PLATE 1

Barana latipes sp. nov., female

(All figures drawn with Abbé camera)

FIG. 1.— Dorsal view. × 12.
FIG. 2.— View from right side, the legs of that side removed. × 12.
FIG. 3.— Left cheliforus. × 50.
FIG. 4.— Foot of second leg of right side. × 50.



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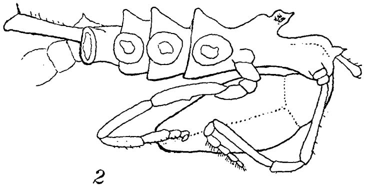

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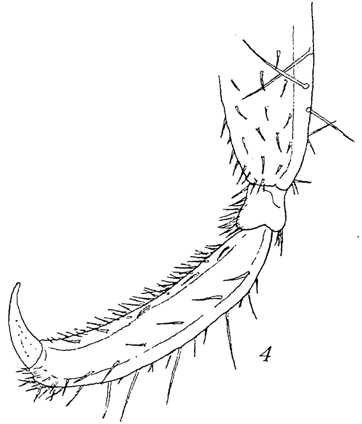

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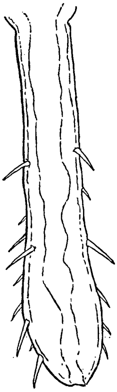
PLATE 2

Banara latipes sp. nov., female

(All figures except Fig. 6 drawn with Abbe camera)

FIG. 5.— Trunk and proboscis, with right cheliforus, palp, and oviger, as seen from below. These appendages have been removed from the left side. × 16.
FIG. 6.— Proboscis viewed directly from the end.
FIG. 7.—Caudal segment from above (dorsal view). × 50.
FIG. 8 —Coxal joints of second right leg; *o*, position of external genital opening. × 20.
FIG. 9.—Oviger of left side; *v*, row of spines shown enlarged in Fig. 10. × 50.
FIG. 10.—Row of denticulate spines marked *x* in Fig. 9. × 213.
FIG. 11.—Palp of left side. × 50.



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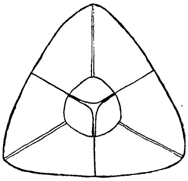

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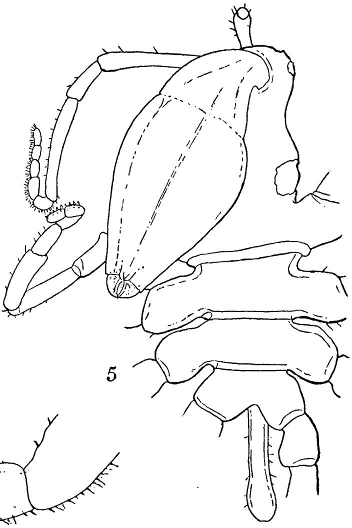

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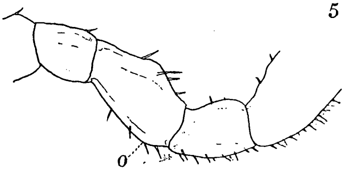

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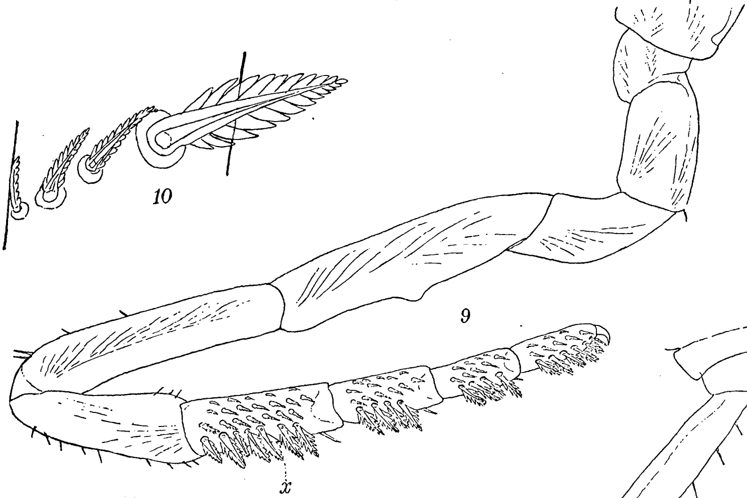

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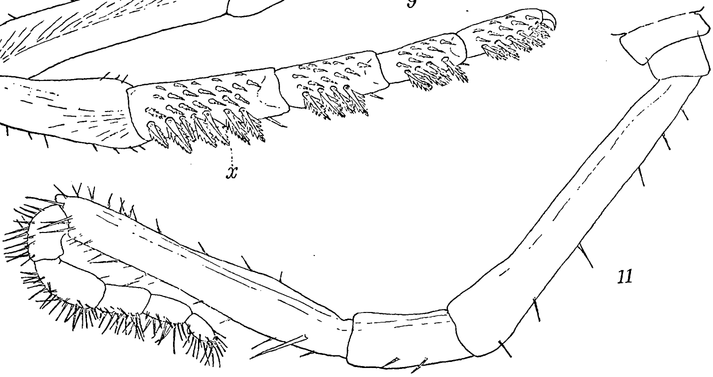

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